

CLAIM AMENDMENTS

Claims 1-24 (canceled)

Claim 25 (previously amended):

A saw comprising:

a base configured to rest on a generally horizontal surface to support the saw during operation;

a work surface supported by the base above the generally horizontal surface on which a workpiece may be cut;

a rotatable blade adapted to cut a workpiece on the work surface, where the blade has an angular momentum when rotating;

an axis around which the blade rotates;

a motor to drive the blade;

a detection system configured to detect a dangerous condition between a person and the blade; and

a reaction system including a brake to decelerate the blade upon detection of the dangerous condition between the person and the blade, where the reaction system is configured to use at least a fraction of the angular momentum of the blade to generate a force tending to urge the axis around which the blade rotates away from the work surface when the brake decelerates the blade.

Claim 26 (previously amended):

The saw of claim 25, where the brake is configured to stop the rotation of the blade.

Claim 27 (currently amended):

A woodworking machine comprising:

a base configured to rest on a generally horizontal surface to support the machine during operation;

a work surface supported by the base above the generally horizontal surface on which a workpiece may be cut;

a rotatable blade adapted to cut a workpiece on the work surface, where the blade has angular momentum when rotating;

an axis around which the blade rotates;

a motor to drive the blade;

a detection system adapted to detect contact between a person and the blade; and

a reaction system adapted to use at least a fraction of the angular momentum of the blade to generate a force tending to urge the axis around which the blade rotates away from the work surface upon the detection of the contact.

Claim 28 (withdrawn):

The woodworking machine of claim 27, where the woodworking machine is a table saw, where the support structure includes a table, where the reaction system is positioned below the table, and where the reaction system is adapted to urge the blade in a direction downward relative to the table.

Claim 29 (previously amended):

The woodworking machine of claim 27, where the woodworking machine is a miter saw, and further comprising a support arm moveable relative to the base, where the blade is mounted on the support arm, and where the reaction system is adapted to urge the blade upward relative to the base.

Claim 30 (previously amended):

The woodworking machine of claim 27, where the reaction system is further adapted to stop the blade.

Claims 31-34 (canceled).

Claim 35 (withdrawn):

The saw of claim 25, where the saw is a table saw, where the blade is adapted to extend at least partially up through the work surface, and where the reaction system tends to urge the axis around which the blade rotates downward relative to the work surface.

Claim 36 (new):

A woodworking machine comprising:

a frame adapted to support workpieces in a cutting region;

a movable cutting tool supported by the frame and configured to cut workpieces in the cutting region;

a motor configured to drive the cutting tool;

a detection system configured to detect one or more dangerous conditions between a person and the cutting tool; and

a brake mechanism including at least one braking component configured to engage and stop movement of the cutting tool upon detection of at least one of the dangerous conditions by the detection system, where engagement of the braking component with the cutting tool tends to urge the cutting tool in a direction away from the cutting region.

Claim 37 (new):

The machine of claim 36, where the rotating cutting tool has angular momentum, and where the braking component is configured to transform at least a portion of the angular momentum of the cutting tool into a force on the cutting tool in a direction away from the cutting region.

Claim 38 (new):

The machine of claim 36, where the detection system is configured to detect accidental contact between a person and the cutting tool, and where the braking component is configured to engage and stop movement of the cutting tool upon detection of such contact by the detection system.

Claim 39 (new):

A miter saw comprising:

a support structure having a cutting zone;

a swing arm above and pivotally attached to the support structure;

a rotatable blade supported by the swing arm so that the blade may move into the cutting zone, where the blade has angular momentum when rotating;

a handle associated with the swing arm and adapted so that a user may pivot the swing arm and blade into the cutting zone;

a motor adapted to drive the blade;

a detection system to detect contact between a person and the blade;

and

a reaction system adapted to create an impulse against movement of the blade into the cutting zone upon detection by the detection system of contact between the person and the blade, where the impulse is created due at least partially to the angular momentum of the blade.

Claim 40 (new):

The miter saw of claim 39, where the reaction system includes a brake mechanism adapted to engage and stop the rotation of the blade, and where the engagement of the brake mechanism with the blade creates the impulse against movement of the blade into the cutting zone.